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Preliminary Amendment

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OCT 31 2007

Amendments to the Claims:

1. [Currently Amended] A remote communication device comprising:
communication circuitry configured to at least one of receive communication
signals and generate communication signals; and

[[an]] a dipole antenna coupled with the communication circuitry and substantially
tuned to first and second different frequency bands, the antenna being configured to
communicate wireless signals corresponding to the communication signals including at
least one of receiving wireless signals and outputting wireless signals, wherein the
antenna is simultaneously substantially tuned to the first and second different frequency
bands.

2. [Original] The remote communication device according to claim 1
wherein the antenna comprises a microstrip antenna.

3. [Original] The remote communication device according to claim 1
wherein the antenna is configured to electromagnetically communicate with a return
loss of less than or equal to approximately -9 dB within the first and second frequency
bands.

4. [Previously Presented] The remote communication device according
to claim 1 further comprising a power source coupled with the communication circuitry.

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5. [Currently Amended] The remote communication device according to claim 1 wherein the antenna is configured to ~~receive~~ output the wireless signals, and further comprising another antenna coupled with the communication circuitry and substantially tuned to first and second different frequency bands, the another antenna being configured to ~~output~~ receive the wireless signals.

6. [Currently Amended] The remote communication device according to claim 5 wherein the ~~another~~ antenna is configured to communicate via backscatter modulation.

7. [Currently Amended] The remote communication device according to claim 5 further comprising a quarter-wavelength transmission line coupled intermediate the communication circuitry and the ~~another~~ antenna.

8. [Original] The remote communication device according to claim 1 wherein the communication circuitry comprises radio frequency identification device circuitry

9. [Original] The remote communication device according to claim 1 wherein the frequency bands are centered at approximately 915 MHz and 2.45 GHz.

10. [Original] The remote communication device according to claim 1 wherein the antenna includes an impedance reduction conductor.

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11. [Currently Amended] A remote communication device comprising:
communication circuitry configured to at least one of receive communication signals and generate communication signals; ~~and~~
an antenna coupled with the communication circuitry and configured to communicate wireless signals corresponding to the communication signals including at least one of receiving wireless signals and outputting wireless signals, the antenna being configured to simultaneously communicate at a plurality of substantially resonant frequencies; and
a quarter-wavelength transmission line coupled intermediate the communication circuitry and the antenna.

12. [Original] The remote communication device according to claim 11 wherein the antenna is substantially tuned to the resonant frequencies.

13. [Previously Presented] The remote communication device according to claim 11 wherein the antenna is configured to electromagnetically communicate with a return loss of less than or equal to approximately -9 dB at the resonant frequencies.

14. [Currently Amended] The remote communication device according to claim 11 wherein the antenna is configured to ~~receive~~ output the wireless signals, and further comprising another antenna coupled with the communication circuitry and configured to ~~output~~ receive the wireless signals at a plurality of substantially resonant frequencies

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15. [Currently Amended] The remote communication device according to claim 14 wherein the ~~another~~ antenna is configured to communicate via backscatter modulation.

16. [Original] The remote communication device according to claim 11 wherein the antenna includes an impedance reduction conductor.

17. [Original] The remote communication device according to claim 11 wherein the communication circuitry comprises radio frequency identification device circuitry.

18. [Currently Amended] A radio frequency identification device comprising:

communication circuitry configured to at least one of receive communication signals and generate communication signals; and

~~an antenna coupled with the communication circuitry and configured to electromagnetically communicate having a return loss less than or equal to approximately 9 dB at a plurality of frequencies, simultaneously tuned to a plurality of resonant frequencies including approximately 915 MHz and 2.45 GHz,~~ the antenna being configured to communicate wireless signals corresponding to the communication signals including at least one of receiving the wireless signals and outputting the wireless signals.

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19. [Original] The radio frequency identification device according to claim 18 wherein the antenna is configured to receive the wireless signals, and further comprising another antenna coupled with the communication circuitry and substantially tuned to a plurality of frequencies, the another antenna being configured to output the wireless signals.

20. [Original] The radio frequency identification device according to claim 19 wherein the another antenna is configured to communicate via backscatter modulation.

21. [Original] The radio frequency identification device according to claim 18 wherein the antenna includes an impedance reduction conductor.

22. [Currently Amended] A radio frequency identification device comprising:

communication circuitry configured to receive communication signals and to generate communication signals;

a first antenna comprising a loop antenna coupled with the communication circuitry and simultaneously substantially tuned to a plurality of frequencies, the first antenna being configured to receive wireless signals corresponding to the received communication signals; and

a second antenna coupled with the communication circuitry and simultaneously substantially tuned to a plurality of frequencies, the second antenna being configured to

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output wireless signals corresponding to the generated communication signals; and
a battery positioned within the loop antenna to tune the loop antenna to one of
the frequencies.

23. [Original] The radio frequency identification device according to claim 22 wherein the antennas are individually configured to electromagnetically communicate with a return loss of less than or equal to approximately -9 dB at individual ones of the plurality of frequencies.

24. [Original] The radio frequency identification device according to claim 22 wherein the second antenna is configured to communicate via backscatter modulation.

25. [Original] The radio frequency identification device according to claim 22 wherein the antennas individually include an impedance reduction conductor.

26. [Currently Amended] A radio frequency identification device comprising:

communication circuitry configured to at least one of receive forward signals from an interrogator and generate return signals;

an antenna coupled with the communication circuitry and configured to communicate wireless signals at one of a plurality of frequencies including at least one of receiving the forward signals and outputting the return signals; and

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wherein the antenna includes an impedance reduction conductor and the antenna is simultaneously substantially tuned to the frequencies at a moment in time.

27. [Original] The radio frequency identification device according to claim 26 wherein the antenna is configured to communicate at the one frequency responsive to a frequency of communication of the interrogator.

28. [Original] The radio frequency identification device according to claim 26 wherein the antenna is configured to receive the forward signals, and further comprising another antenna coupled with the communication circuitry and configured to output the return signals at one of a plurality of frequencies.

29. [Original] The radio frequency identification device according to claim 28 wherein the another antenna is configured to communicate via backscatter modulation.

30. [Currently Amended] The radio frequency identification device according to claim 26 wherein the ~~antenna includes an impedance reduction conductor~~ tunes the antenna to one of the frequencies.

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31. [Currently Amended] A wireless communication system comprising:
an interrogator configured to emit forward signals; ~~and~~
a remote communication device configured to at least one of receive the forward signals from the interrogator and generate return signals for communication to the interrogator, the remote communication device being configured to communicate wireless signals including at least one of receiving the forward signals and outputting the return signals at a plurality of frequencies using one antenna simultaneously substantially tuned to the frequencies; and
a battery positioned to tune the antenna to one of the frequencies.

32. [Original] The wireless communication system according to claim 31 wherein the interrogator is configured to output the forward signals at one of the frequencies.

33. [Original] The wireless communication system according to claim 31 wherein the remote communication device is configured to communicate at one of the plurality of frequencies responsive to a frequency of communication of the interrogator.

34. [Currently Amended] The wireless communication system according to claim 31 wherein the ~~remote communication device includes an antenna substantially tuned to the frequencies~~ battery is substantially centered within the antenna comprising a loop antenna.

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35. [Original] The wireless communication system according to claim 34 wherein the antenna is configured to receive the forward signals, and the remote communication device includes another antenna substantially tuned to the frequencies and configured to output the return signals.

36. [Original] The wireless communication system according to claim 34 wherein the antennas individually include an impedance reduction conductor.

37. [Original] The wireless communication system according to claim 31 wherein the remote communication device comprises a radio frequency identification device.

38. [Currently Amended] A wireless communication method comprising:
providing a remote communication device having an antenna simultaneously substantially tuned to first and second different frequency bands; and

communicating wireless signals using the antenna including at least one of receiving wireless signals at a frequency within one of the frequency bands and outputting wireless signals at a frequency within one of the frequency bands; and

wherein the antenna is not tuned to at least one frequency between the first and the second different frequency bands.

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39. [Original] The method according to claim 38 wherein the providing comprises providing a remote communication device having the antenna configured to electromagnetically communicate with a return loss of less than or equal to approximately -9 dB within the first and second frequency bands

40. [Original] The method according to claim 38 wherein the providing comprises providing a remote communication device having a plurality of antennas individually substantially tuned to first and second different frequency bands.

41. [Original] The method according to claim 40 wherein the communicating comprises receiving using one of the antennas and outputting using another of the antennas.

42. [Original] The method according to claim 38 further comprising processing wireless signals using the remote communication device.

43. [Original] The method according to claim 38 wherein the providing comprises providing a radio frequency identification device.

44. [Currently Amended] A wireless communication method comprising:
providing a remote communication device having an antenna configured to simultaneously communicate at a plurality of resonant frequencies; and
communicating wireless signals using the antenna including at least one of

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receiving wireless signals at one of the frequencies and outputting wireless signals at one of the frequencies; and

tuning the antenna to at least one of the frequencies using a power source and an impedance reduction conductor.

45. [Original] The method according to claim 44 wherein the providing comprises providing a remote communication device having the antenna configured to electromagnetically communicate with a return loss of less than or equal to approximately -9 dB at the plurality of frequencies.

46. [Original] The method according to claim 44 wherein the providing comprises providing a remote communication device having a plurality of antennas individually substantially tuned to the plurality of frequencies.

47. [Original] The method according to claim 46 wherein the communicating comprises receiving using one of the antennas and outputting using another of the antennas.

48. [Original] The method according to claim 44 further comprising processing wireless signals using the remote communication device.

49. [Original] The method according to claim 44 wherein the providing comprises providing a radio frequency identification device.

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50. [Currently Amended] A radio frequency identification device communication method comprising:

providing a radio frequency identification device configured to communicate wireless signals at a plurality of frequencies using one antenna comprising a dipole antenna simultaneously substantially tuned to the frequencies;

receiving forward signals at one of the frequencies; and

outputting return signals at one of the frequencies.

51. [Currently Amended] The method according to claim 50 wherein the providing comprises providing the radio frequency identification device having the one ~~antenna configured to receive the forward signals and another~~ antenna configured to output the return signals.

52. [Original] The method according to claim 50 further comprising processing wireless signals using the radio frequency identification device.

53. [Original] The method according to claim 50 wherein the receiving and outputting occur at the same frequency.

54. [Currently Amended] A wireless communication method comprising:
communicating a forward link signal at one of a plurality of frequencies using an interrogator;

receiving the forward link signal using one antenna of a remote communication

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device substantially tuned to the plurality of frequencies; and

outputting a return link signal using another antenna of the remote communication device substantially tuned to the plurality of frequencies; and
tuning the one antenna to one of the frequencies using a power source.

55. [Original] The method according to claim 54 further comprising processing wireless signals using the remote communication device.

56. [Original] The method according to claim 54 wherein the receiving and outputting comprise receiving and outputting using a radio frequency identification device.

57. [Currently Amended] A method of forming a remote communication device comprising:

providing communication circuitry configured to at least one of receive forward signals and output return signals;

coupling at least one antenna with the communication circuitry; and

substantially tuning the at least one antenna to simultaneously communicate at a plurality of frequencies, wherein the tuning comprises tuning the at least one antenna to communicate at one of the frequencies using an impedance reduction conductor.

58. [Previously Presented] The method according to claim 57 further comprising coupling a power source with the communication circuitry.

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59. [Original] The method according to claim 57 wherein the providing comprises providing radio frequency identification device communication circuitry.

60. [Original] The method according to claim 57 wherein the coupling comprises coupling a plurality of antennas with the communication circuitry, one of the antennas being configured to receive wireless signals corresponding to the forward signals and the other of the antennas being configured to communicate wireless signals corresponding to the return signals.

61. [Currently Amended] The method according to claim 57 wherein the ~~tuning comprises tuning using an impedance reduction strip~~ coupling comprises coupling the at least one antenna comprising a dipole antenna.

62. [Currently Amended] A radio frequency identification device communication method comprising:

providing an interrogator;

communicating a forward signal at one of a plurality of frequencies using the interrogator;

providing a radio frequency identification device configured to communicate with interrogator;

receiving the forward signal using one antenna of the radio frequency identification device substantially tuned to the plurality of frequencies;

processing the forward signal using communication circuitry of the radio

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frequency identification device after the receiving;

outputting a continuous wave signal using the interrogator after the communicating;

generating a return signal using the communication circuitry after the processing;

and

modulating the continuous wave signal according to the return signal using another antenna of the radio frequency identification device comprising a dipole antenna substantially tuned to the plurality of frequencies.

63. [Previously Presented] The remote communication device according to claim 1 further comprising a power source positioned with respect to the antenna to tune the antenna to one of the first and the second different frequency bands.

64. [Previously Presented] The remote communication device according to claim 4 wherein the antenna comprises a loop antenna and the power source is centered with respect to the loop antenna.

65. [Previously Presented] The remote communication device according to claim 11 further comprising a power source positioned with respect to the antenna to tune the antenna to one of the substantially resonant frequencies.

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66. [Previously Presented] The radio frequency identification device according to claim 18 further comprising a power source positioned with respect to the antenna to tune the antenna to one of the plurality of frequencies.

67. [Currently Amended] The radio frequency identification device according to claim 22 wherein the ~~first antenna comprises a loop antenna, and further comprising a power source~~ battery is centered with respect to the loop antenna to tune the loop antenna to one of the frequencies.

68. [Previously Presented] The radio frequency identification device according to claim 26 further comprising a power source positioned with respect to the antenna to tune the antenna to one of the plurality of frequencies.

69. [Previously Presented] The method according to claim 38 further comprising tuning the antenna to one of the first and the second different frequency bands using a power source.

70. [Canceled].

71. [Canceled].

72. [Previously Presented] The method according to claim 57 wherein the substantially tuning comprises using a power source.

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73. [Previously Presented] The remote communication device according to claim 1 wherein the antenna is substantially tuned to the first and second different frequency bands having different respective carrier frequencies.

74. [Previously Presented] The remote communication device according to claim 1 wherein the antenna is configured to communicate at different substantially resonant frequencies corresponding to signals generated using at least one interrogator and which have different carrier frequencies.

75. [Previously Presented] The radio frequency identification device according to claim 18 wherein the plurality of frequencies correspond to different carrier frequencies of the communication signals.

76. [Previously Presented] The radio frequency identification device according to claim 22 wherein the first and second antennas are individually substantially tuned to the plurality of frequencies comprising carrier frequencies of the communication signals.

77. [Previously Presented] The radio frequency identification device according to claim 26 wherein the frequencies comprise carrier frequencies of the forward and return signals.

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78. [Previously Presented] The wireless communication system according to claim 31 wherein the antenna is substantially tuned to the frequencies comprising carrier frequencies of the forward signals and the return signals.

79. [Previously Presented] The method according to claim 38 wherein the first and the second different frequency bands have respective different carrier frequencies and frequencies of the frequency bands do not overlap one another.

80. [Previously Presented] The method according to claim 44 wherein the antenna is configured to communicate at the resonant frequencies corresponding to a plurality of different carrier frequencies.

81. [Previously Presented] The remote communication device according to claim 1 wherein the communication circuitry is configured to control reflection, by the antenna, of electromagnetic energy present at the remote communication device to implement backscatter communications.

82. [Previously Presented] The remote communication device according to claim 4 wherein the power source comprises a battery.

83. [Previously Presented] The remote communication device according to claim 10 wherein the impedance reduction conductor is configured to substantially tune the antenna to the first and second different frequency bands.

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84. [Currently Amended] The remote communication device according to claim 83 wherein ~~the antenna comprises a dipole antenna, and~~ the impedance reduction conductor is coupled with one half of the dipole antenna.

85. [Previously Presented] The wireless communication system according to claim 31 wherein the interrogator is configured to output a continuous wave signal and the remote communication device is configured to backscatter modulate the continuous wave signal to output the return signals.

86. [New] The remote communication device according to claim 10 wherein only one half of the dipole antenna includes the impedance reduction conductor.